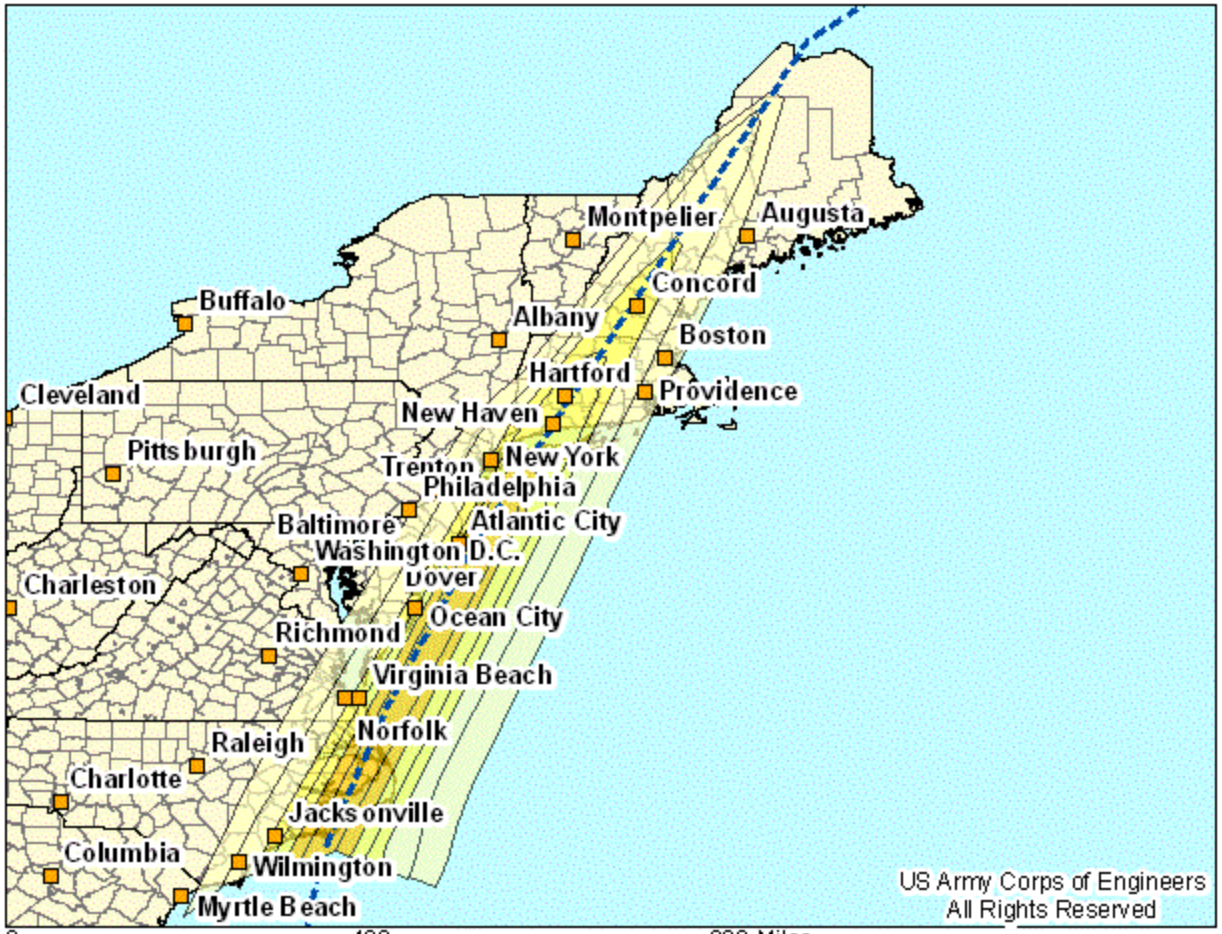
US Army Corps of Engineers

Hurricane Irene Projected Damage Areas

Landfall Expected In About 22 Hours

For Planning Purposes Only!



Post Landfall Projected Damage Areas

This model is based on a Category 2 storm making landfall near Morehead City, NC.

Forecast Track

Projected Damage Areas

- CAT 0-type damage
- CAT 1-type damage
- CAT 2-type damage
- CAT 3-type damage
- CAT 4-type damage
- CAT 5-type damage

Information provided on this page displays a projected or actual Category 2 storm making landfall near Morehead City, NC. These projections are based on information from the NHC (1100 EDT 08/26/2011) forecast and extrapolated by LRL staff to represent a landfall condition that has either occurred or may occur in the near future.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

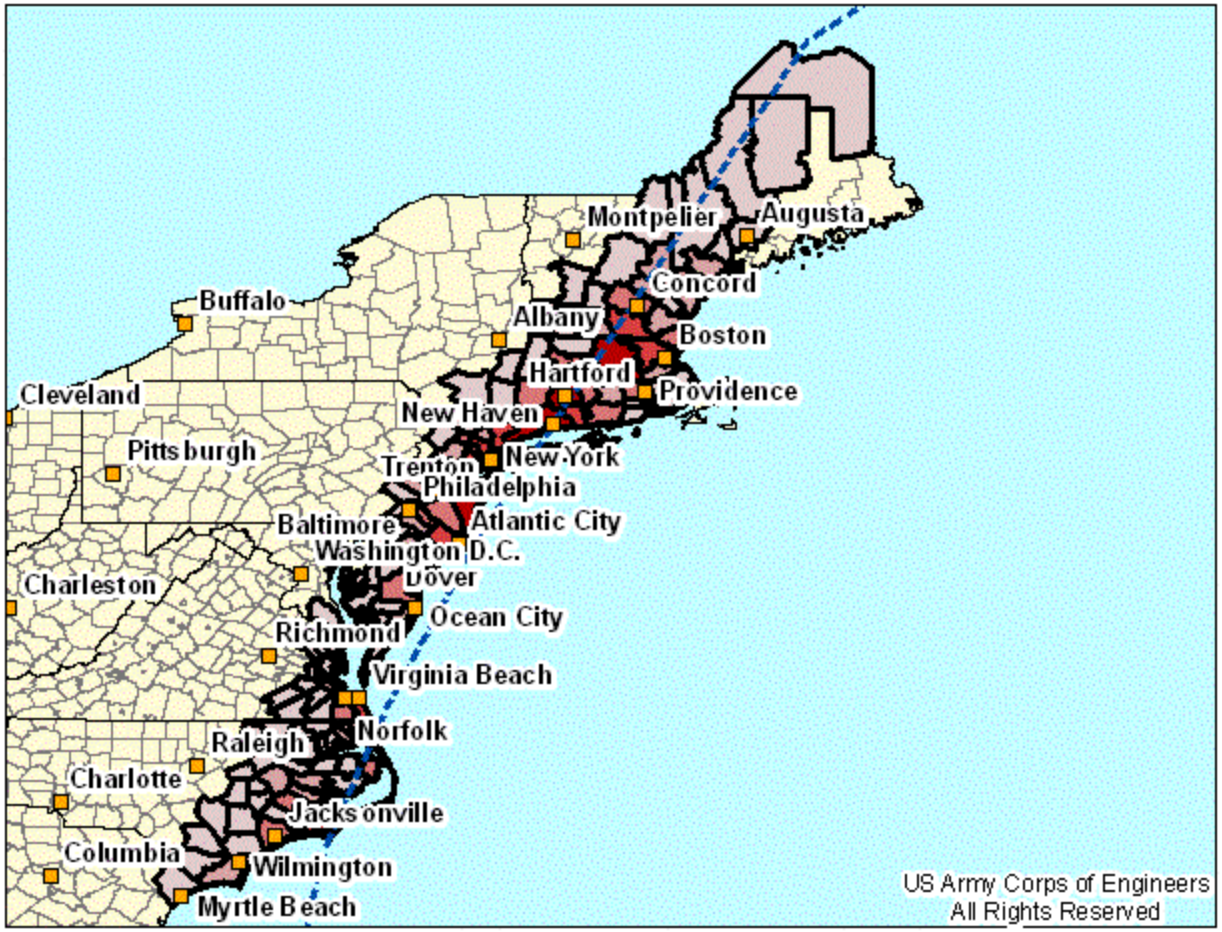
Hurricane Irene Projected Damage Areas	
Generated By: Siemsen, LRL 1130 EDT 08/26/2011	
Sources: HURREVAC LRL-DEBRIS	Page 1 of 26

US Army Corps of Engineers

Hurricane Irene Debris Model

Landfall Expected In About 22 Hours

For Planning Purposes Only!



Post Landfall Debris Model Results

New York - 15,304,000 Yards
New Jersey - 9,331,000 Yards
Connecticut - 7,298,000 Yards
Massachusetts - 4,203,000 Yards
North Carolina - 3,209,000 Yards
Virginia - 2,453,000 Yards
New Hampshire - 1,577,000 Yards
Rhode Island - 439,000 Yards
Pennsylvania - 422,000 Yards
Maine - 359,000 Yards
Delaware - 327,000 Yards
Maryland - 291,000 Yards
Vermont - 40,000 Yards
South Carolina - 8,000 Yards

Model results per County on following page

This model is based on a Category 2 storm making landfall near Morehead City, NC.

Forecast Track

Debris

- < 100,000 cubic yards
- 100,000 - 249,999 cubic yards
- 250,000 - 499,999 cubic yards
- 500,000 - 999,999 cubic yards
- >1,000,000 cubic yards

Information provided on this page displays a Category 2 storm making landfall near Morehead City, NC. These projections are based on information from the NHC (1100 EDT 08/26/2011) forecast. The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Irene Debris Model

Generated By:
Siemsen, LRL 1130 EDT 08/26/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Debris Model

Landfall Expected In About 22 Hours

For Planning Purposes Only!

State	Yards per State	County	Yards per County
Connecticut		Fairfield County	1,809,000
		Hartford County	1,968,000
		Litchfield County	331,000
		Middlesex County	504,000
		New Haven County	1,910,000
		New London County	274,000
		Tolland County	346,000
		Windham County	156,000
Connecticut	7,298,000		
Delaware		Kent County	66,000
		New Castle County	< 1,000
		Sussex County	261,000
Delaware	327,000		
Maine		Androscoggin County	46,000
		Aroostook County	< 1,000
		Cumberland County	110,000
		Franklin County	22,000
		Kennebec County	7,000
		Oxford County	57,000
		Piscataquis County	< 1,000
		Somerset County	10,000
		York County	107,000
Maine	359,000		
Maryland		Caroline County	9,000
		Dorchester County	9,000
		Somerset County	26,000
		St. Mary's County	3,000
		Talbot County	< 1,000

State	Yards per State	County	Yards per County
Maryland		Wicomico County	94,000
(continued)		Worcester County	150,000
Maryland	291,000		
Massachusetts		Berkshire County	14,000
		Bristol County	79,000
		Essex County	305,000
		Franklin County	91,000
		Hampden County	1,022,000
		Hampshire County	257,000
		Middlesex County	785,000
		Norfolk County	243,000
		Plymouth County	33,000
		Suffolk County	221,000
		Worcester County	1,153,000
Massachusetts	4,203,000		
New Hampshire		Belknap County	127,000
		Carroll County	131,000
		Cheshire County	106,000
		Coos County	37,000
		Grafton County	60,000
		Hillsborough County	522,000
		Merrimack County	281,000
		Rockingham County	200,000
		Strafford County	85,000
		Sullivan County	28,000
New Hampshire	1,577,000		

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

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Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Irene Debris Model

Generated By:
Siemsen, LRL 1130 EDT 08/26/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Debris Model

Landfall Expected In About 22 Hours

For Planning Purposes Only!

State	Yards per State	County	Yards per County
New Jersey		Atlantic County	757,000
		Bergen County	899,000
		Burlington County	307,000
		Camden County	283,000
		Cape May County	234,000
		Cumberland County	132,000
		Essex County	645,000
		Gloucester County	145,000
		Hudson County	452,000
		Hunterdon County	11,000
		Mercer County	205,000
		Middlesex County	723,000
		Monmouth County	1,335,000
		Morris County	197,000
		Ocean County	1,968,000
		Passaic County	385,000
		Salem County	14,000
		Somerset County	170,000
		Sussex County	< 1,000
		Union County	469,000
New Jersey	9,331,000		
New York		Bronx County	751,000
		Columbia County	< 1,000
		Dutchess County	96,000
		Kings County	2,227,000
		Nassau County	3,390,000
		New York County	552,000
		Orange County	75,000
		Putnam County	72,000
		Queens County	2,735,000

State	Yards per State	County	Yards per County
New York		Richmond County	342,000
(continued)		Rockland County	191,000
		Suffolk County	3,995,000
		Ulster County	4,000
		Westchester County	874,000
New York	15,304,000		
North Carolina		Beaufort County	117,000
		Bertie County	29,000
		Bladen County	2,000
		Brunswick County	109,000
		Camden County	46,000
		Carteret County	614,000
		Chowan County	27,000
		Columbus County	5,000
		Craven County	334,000
		Currituck County	162,000
		Dare County	366,000
		Duplin County	33,000
		Edgecombe County	14,000
		Gates County	15,000
		Greene County	10,000
		Halifax County	4,000
		Hertford County	20,000
		Hyde County	94,000
		Jones County	26,000
		Lenoir County	36,000
		Martin County	26,000
		New Hanover County	246,000

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

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Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Irene Debris Model

Generated By:
Siemsen, LRL 1130 EDT 08/26/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Debris Model

Landfall Expected In About 22 Hours

For Planning Purposes Only!

State	Yards per State	County	Yards per County
North Carolina		Northampton County	7,000
(continued)		Onslow County	305,000
		Pamlico County	90,000
		Pasquotank County	139,000
		Pender County	69,000
		Perquimans County	37,000
		Pitt County	111,000
		Sampson County	2,000
		Tyrrell County	60,000
		Washington County	44,000
		Wayne County	10,000
		Wilson County	< 1,000
North Carolina	3,209,000		
Pennsylvania		Bucks County	141,000
		Delaware County	< 1,000
		Montgomery County	4,000
		Philadelphia County	277,000
Pennsylvania	422,000		
Rhode Island		Bristol County	23,000
		Kent County	74,000
		Newport County	20,000
		Providence County	257,000
		Washington County	65,000
Rhode Island	439,000		
South Carolina		Horry County	8,000
South Carolina	8,000		
Vermont		Bennington County	< 1,000
Vermont		Windham County	34,000
(continued)		Windsor County	6,000
Vermont	40,000		
Virginia		Accomack County	79,000
		Chesapeake city	310,000
		Franklin city	6,000
		Gloucester County	27,000
		Hampton city	152,000
		Isle of Wight County	27,000
		James City County	39,000
		King and Queen County	< 1,000
		Lancaster County	8,000
		Mathews County	7,000
		Middlesex County	7,000
		Newport News city	202,000
		Norfolk city	255,000
		Northampton County	20,000
		Northumberland County	6,000
		Poquoson city	13,000
		Portsmouth city	140,000
		Southampton County	11,000
		Suffolk city	87,000
		Surry County	5,000
		Sussex County	2,000
		Virginia Beach city	998,000
		Williamsburg city	7,000
		York County	45,000
Virginia	2,453,000		

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

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Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Irene Debris Model

Generated By:
Siemsen, LRL 1130 EDT 08/26/2011

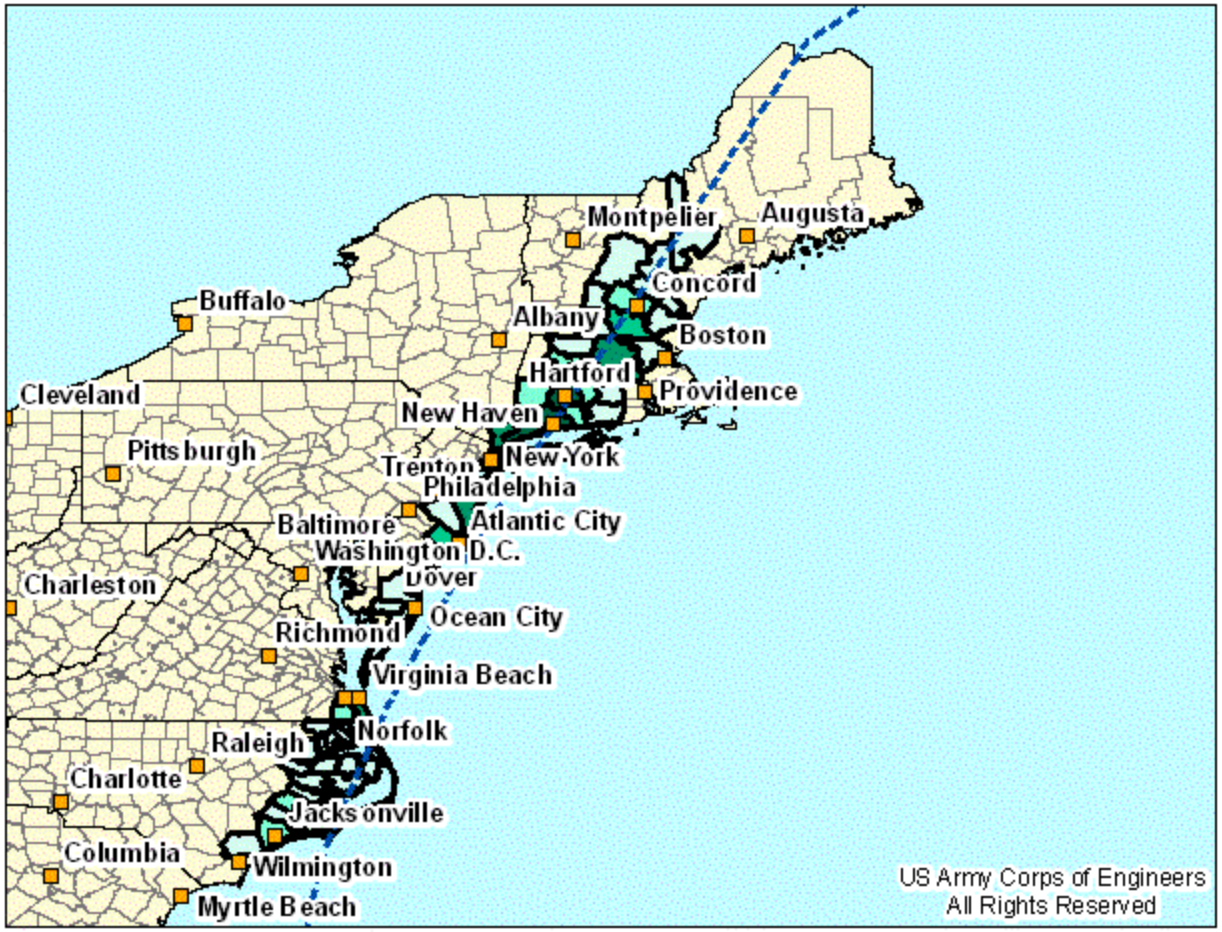
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Commodities Model

Landfall Expected In About 22 Hours

For Planning Purposes Only!



Post Landfall Water Model Results

Day One / Day Two / Day Three

New York – 125/255/510 Truckloads
Connecticut – 48/95/190 Truckloads
New Jersey – 20/40/78 Truckloads
Massachusetts – 18/37/74 Truckloads
North Carolina – 10/20/38 Truckloads
New Hampshire – 10/20/37 Truckloads
Virginia – 9/18/35 Truckloads
Maryland – 1/2/4 Truckloads
Delaware – 1/2/3 Truckloads
Maine – 1/1/1 Truckloads

Model results per County on following page

This model is based on a Category 2 storm making landfall near Morehead City, NC.

Forecast Track

Commodities

- < 5 Trucks Each
- 5 - 10 Trucks Each
- 11 - 20 Trucks Each
- 21 - 40 Trucks Each
- > 40 Trucks Each

Information provided on this page displays a Category 2 storm making landfall near Morehead City, NC. These projections are based on information from the NHC ***(1100 EDT 08/26/2011)*** forecast. The amount of commodities forecasted is based on Mission Guide Book requirements and SME input. The graphic represents daily needs with a ramp-up in the distribution system – three days for Points of Distribution (PODs) to be fully in place and operational. Volume shown is for each commodity – water and ice. Commodity need may be supplied by multiple agencies and/or sources.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Irene Commodities Model

Generated By:
Siemsen, LRL 1130 EDT 08/26/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Commodities Model

Landfall Expected In About 22 Hours

For Planning Purposes Only!

State	Truckloads per State	County	Truckloads per County
Connecticut		Fairfield County	53
		Hartford County	52
		Litchfield County	8
		Middlesex County	10
		New Haven County	50
		New London County	4
		Tolland County	9
		Windham County	4
Connecticut	190		
Delaware		Sussex County	3
Delaware	3		
Maine		Oxford County	1
Maine	1		
Maryland		Wicomico County	1
		Worcester County	3
Maryland	4		
Massachusetts		Franklin County	2
		Hampden County	28
		Hampshire County	9
		Middlesex County	2
		Worcester County	33
Massachusetts	74		
New Hampshire		Belknap County	4
		Carroll County	2
		Cheshire County	2
		Grafton County	1

State	Truckloads per State	County	Truckloads per County
New Hampshire		Hillsborough County	17
(continued)		Merrimack County	8
		Rockingham County	1
		Strafford County	1
		Sullivan County	1
New Hampshire	37		
New Jersey		Atlantic County	14
		Burlington County	1
		Cape May County	6
		Monmouth County	25
		Ocean County	32
New Jersey	78		
New York		Bronx County	44
		Kings County	135
		Nassau County	80
		New York County	1
		Putnam County	1
		Queens County	137
		Suffolk County	87
		Westchester County	25
New York	510		
North Carolina		Beaufort County	2
		Bertie County	1
		Camden County	1
		Carteret County	4
		Chowan County	1

Source: US Army Corps of Engineers, All Rights Reserved

The amount of commodities forecasted is based on Mission Guide Book requirements and SME input and the above table indicates suggested daily needs based on full deployment of a commodities distribution system. Volume shown is for each commodity – water and ice. Commodity need may be supplied by multiple agencies and/or sources.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Irene Commodities Model

Generated By:
Siemsen, LRL 1130 EDT 08/26/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Commodities Model

Landfall Expected In About 22 Hours

For Planning Purposes Only!

State	Truckloads per State	County	Truckloads per County
North Carolina		Craven County	6
(continued)		Currituck County	2
		Dare County	3
		Gates County	1
		Hyde County	1
		Jones County	1
		Martin County	1
		Onslow County	6
		Pamlico County	1
		Pasquotank County	3
		Pender County	1
		Perquimans County	1
		Tyrrell County	1
		Washington County	1
North Carolina	38		
Virginia		Accomack County	2
		Chesapeake city	6
		Norfolk city	1
		Northampton County	1
		Virginia Beach city	25
Virginia	35		

Source: US Army Corps of Engineers, All Rights Reserved

The amount of commodities forecasted is based on Mission Guide Book requirements and SME input and the above table indicates suggested daily needs based on full deployment of a commodities distribution system. Volume shown is for each commodity – water and ice. Commodity need may be supplied by multiple agencies and/or sources.

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or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Irene Commodities Model

Generated By:
Siemsen, LRL 1130 EDT 08/26/2011

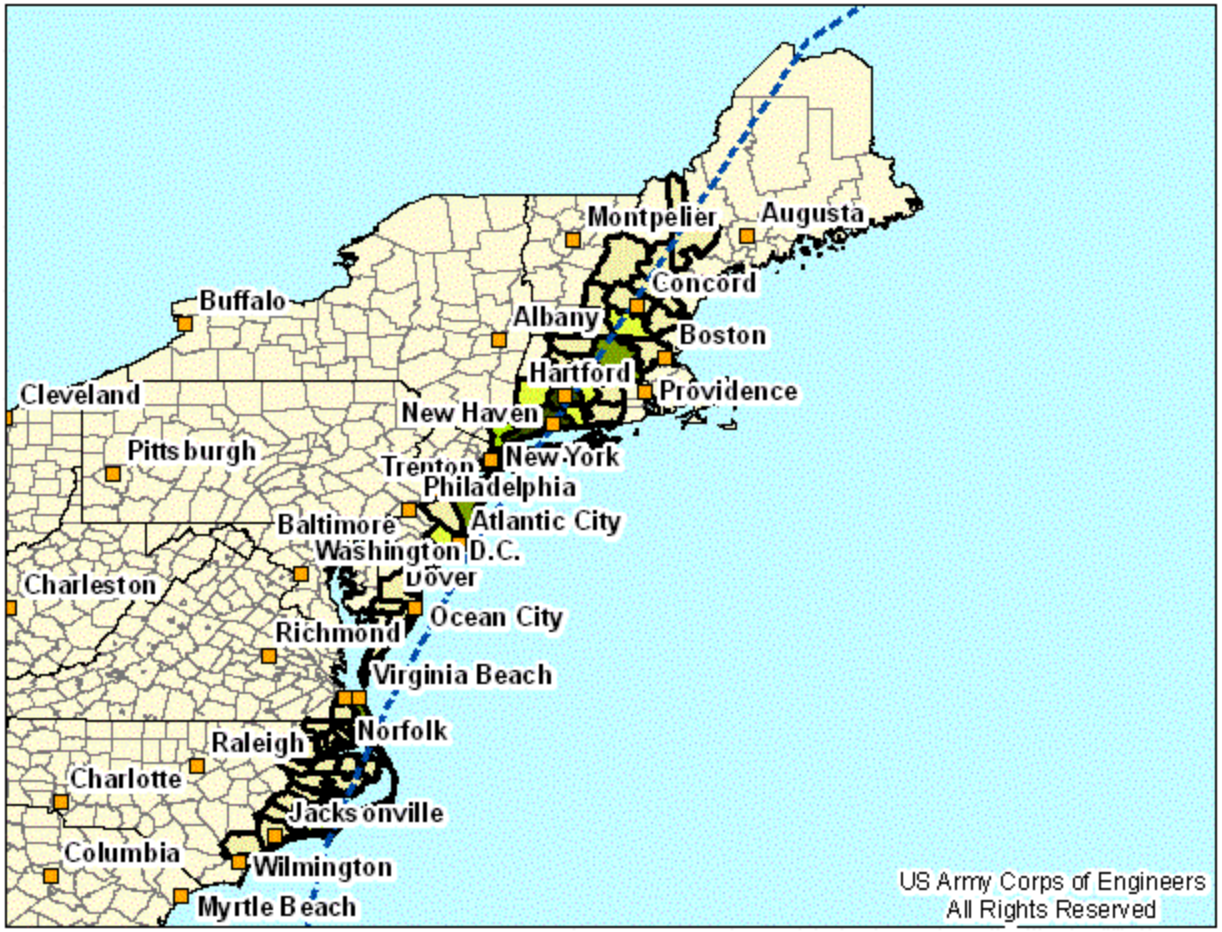
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Temporary Roofing Model

Landfall Expected In About 22 Hours

For Planning Purposes Only!



Post Landfall Temporary Roofing Model Results

New York - 87,600
Connecticut - 43,800
New Jersey - 21,200
Massachusetts - 17,100
North Carolina - 9,600
New Hampshire - 8,100
Virginia - 8,000
Maryland - 900
Delaware - 600

Model results per County on following page

This model is based on a Category 2 storm making landfall near Morehead City, NC.

Forecast Track

Temporary Roofing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 2 storm making landfall near Morehead City, NC. These projections are based on information from the NHC (1100 EDT 08/26/2011) forecast. Temporary roofing is based on 5% in CAT 1 and 8% in CAT 2.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Irene Roofing Model

Generated By:
Siemsen, LRL 1130 EDT 08/26/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Temporary Roofing Model

Landfall Expected In About 22 Hours

For Planning Purposes Only!

State	House Units per State	County	House Units per County
Connecticut		Fairfield County	12,000
		Hartford County	11,600
		Litchfield County	2,200
		Middlesex County	2,600
		New Haven County	11,500
		New London County	900
		Tolland County	2,200
		Windham County	800
Connecticut	43,800		
Delaware		Sussex County	600
Delaware	600		
Maine		Oxford County	< 100
Maine			
Maryland		Wicomico County	< 100
		Worcester County	900
Maryland	900		
Massachusetts		Franklin County	500
		Hampden County	6,600
		Hampshire County	2,000
		Middlesex County	400
		Worcester County	7,600
Massachusetts	17,100		
New Hampshire		Belknap County	1,200
		Carroll County	700
		Cheshire County	400
		Grafton County	< 100

State	House Units per State	County	House Units per County
New Hampshire		Hillsborough County	3,800
(continued)		Merrimack County	2,000
		Rockingham County	< 100
		Strafford County	< 100
		Sullivan County	< 100
New Hampshire	8,100		
New Jersey		Atlantic County	3,400
		Burlington County	< 100
		Cape May County	1,600
		Monmouth County	6,200
		Ocean County	10,000
New Jersey	21,200		
New York		Bronx County	2,600
		Kings County	13,400
		Nassau County	21,700
		Putnam County	< 100
		Queens County	20,700
		Suffolk County	24,500
		Westchester County	4,700
New York	87,600		
North Carolina		Beaufort County	400
		Bertie County	< 100
		Camden County	300
		Carteret County	2,100
		Chowan County	200
		Craven County	1,400

Temporary roofing is based on 5% in CAT 1 and 8% in CAT 2.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Irene Roofing Model

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Siemsen, LRL 1130 EDT 08/26/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Temporary Roofing Model

Landfall Expected In About 22 Hours

For Planning Purposes Only!

State	House Units per State	County	House Units per County
North Carolina		Currituck County	700
(continued)		Dare County	1,200
		Gates County	< 100
		Hyde County	200
		Jones County	< 100
		Martin County	< 100
		Onslow County	1,000
		Pamlico County	400
		Pasquotank County	900
		Pender County	< 100
		Perquimans County	300
		Tyrrell County	200
		Washington County	300
North Carolina	9,600		
Virginia		Accomack County	500
		Chesapeake city	1,300
		Norfolk city	< 100
		Northampton County	< 100
		Virginia Beach city	6,200
Virginia	8,000		

Temporary roofing is based on 5% in CAT 1 and 8% in CAT 2.

Details about this model may be obtained at http://www.englink.usace.army.mil
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Hurricane Irene Roofing Model

Generated By:
Siemsen, LRL 1130 EDT 08/26/2011

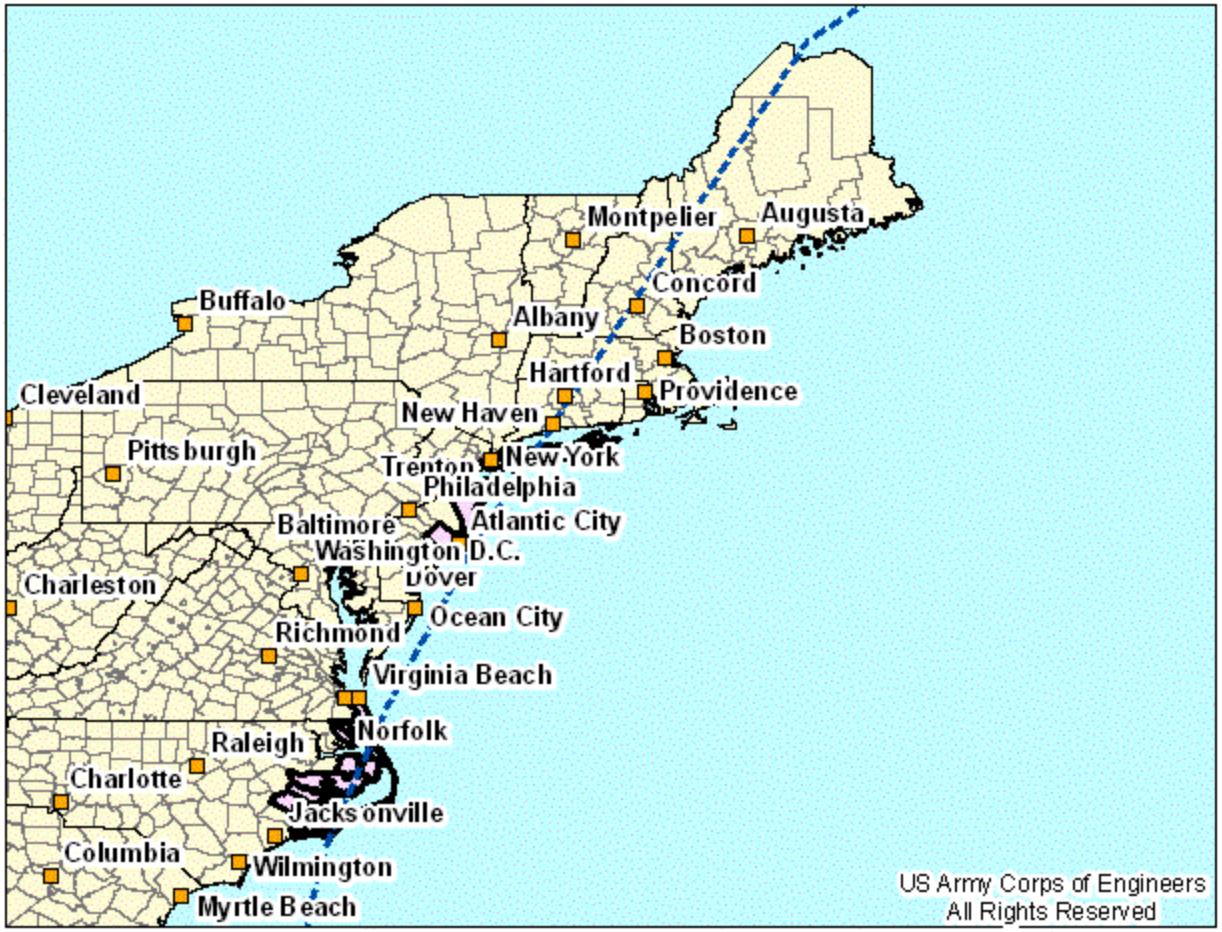
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Temporary Housing Model

Landfall Expected In About 22 Hours

For Planning Purposes Only!



0 400 800 Miles

Post Landfall Temporary Housing Model Results

Minimal Temporary Housing is expected

Model results per County on following page

This model is based on a Category 2 storm making landfall near Morehead City, NC.

Forecast Track

Temporary Housing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 2 storm making landfall near Morehead City, NC. These projections are based on information from the NHC (1100 EDT 08/26/2011) forecast. Temporary housing is based on 0.5% in CAT 2. The number indicated represents a possible need but not necessarily the scope of mission for USACE.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Irene Housing Model	
Generated By: Siemsen, LRL 1130 EDT 08/26/2011	
Sources: HURREVAC LRL-DEBRIS	Page 12 of 26

US Army Corps of Engineers

Hurricane Irene Temporary Housing Model

Landfall Expected In About 22 Hours

For Planning Purposes Only!

State	House Units per State	County	House Units per County
New Jersey		Atlantic County	< 100
		Ocean County	< 100
New Jersey			
New York		Nassau County	< 100
		Suffolk County	< 100
New York			
North Carolina		Beaufort County	< 100
		Camden County	< 100
		Carteret County	< 100
		Craven County	< 100
		Currituck County	< 100
		Dare County	< 100
		Hyde County	< 100
		Pamlico County	< 100
		Pasquotank County	< 100
		Tyrrell County	< 100
North Carolina			
Virginia		Virginia Beach city	< 100
Virginia			

Temporary housing is based on 0.5% in CAT 2.
The number indicated represents a possible need but not necessarily the scope of mission for USACE.

Details about this model may be obtained at http://www.englink.usace.army.mil
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Hurricane Irene Housing Model

Generated By:
Siemsen, LRL 1130 EDT 08/26/2011

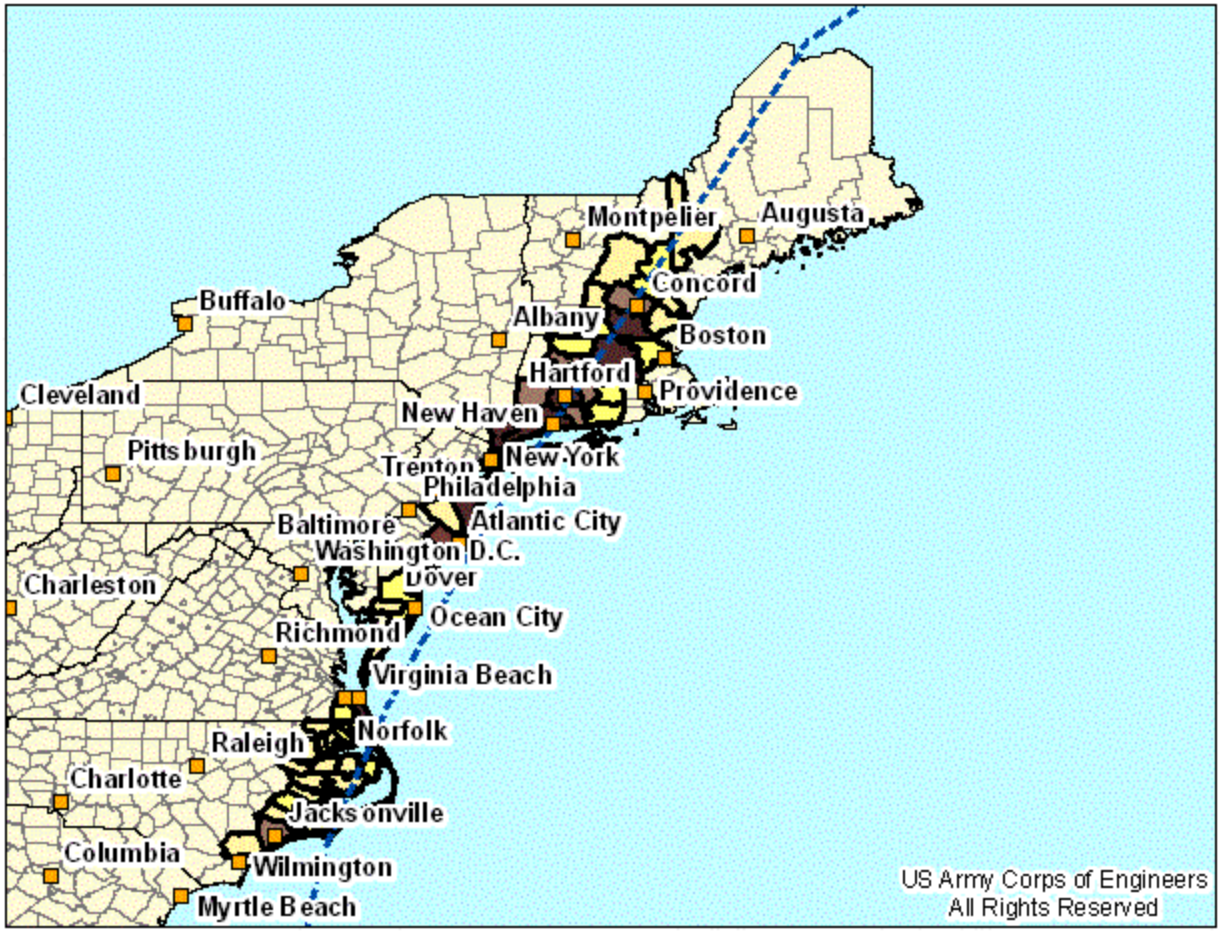
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Population Model

Landfall Expected In About 22 Hours

For Planning Purposes Only!



Post Landfall Population Model Results

New York - 8,657,000
Connecticut - 3,188,000
New Jersey - 1,288,000
Massachusetts - 1,228,000
Virginia - 548,000
New Hampshire - 536,000
North Carolina - 453,000
Maryland - 41,000
Delaware - 39,000
Maine - 4,000

Model results per County on following page

This model is based on a Category 2 storm making landfall near Morehead City, NC.

Forecast Track

Population

- < 25,000 persons
- 25,000 - 99,999 persons
- 100,000 - 174,999 persons
- 175,000 - 249,999 persons
- > 250,000 persons

Information provided on this page displays a Category 2 storm making landfall near Morehead City, NC. These projections are based on information from the NHC (1100 EDT 08/26/2011) forecast. The numbers of persons included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2010 values).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Irene Population Model

Generated By:
Siemsen, LRL 1130 EDT 08/26/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Population Model

Landfall Expected In About 22 Hours

For Planning Purposes Only!

State	Population per State	County	Population per County
Connecticut		Fairfield County	893,000
		Hartford County	882,000
		Litchfield County	129,000
		Middlesex County	166,000
		New Haven County	851,000
		New London County	62,000
		Tolland County	152,000
		Windham County	53,000
Connecticut	3,188,000		
Delaware		Sussex County	39,000
Delaware	39,000		
Maine		Oxford County	4,000
Maine	4,000		
Maryland		Wicomico County	< 1,000
		Worcester County	41,000
Maryland	41,000		
Massachusetts		Franklin County	27,000
		Hampden County	465,000
		Hampshire County	145,000
		Middlesex County	33,000
		Worcester County	558,000
Massachusetts	1,228,000		
New Hampshire		Belknap County	59,000
		Carroll County	34,000
		Cheshire County	29,000
		Grafton County	< 1,000

State	Population per State	County	Population per County
New Hampshire		Hillsborough County	276,000
(continued)		Merrimack County	136,000
		Rockingham County	2,000
		Strafford County	< 1,000
		Sullivan County	< 1,000
New Hampshire	536,000		
New Jersey		Atlantic County	225,000
		Burlington County	3,000
		Cape May County	93,000
		Monmouth County	421,000
		Ocean County	546,000
New Jersey	1,288,000		
New York		Bronx County	748,000
		Kings County	2,302,000
		Nassau County	1,367,000
		New York County	< 1,000
		Putnam County	< 1,000
		Queens County	2,339,000
		Suffolk County	1,477,000
		Westchester County	424,000
New York	8,657,000		
North Carolina		Beaufort County	21,000
		Bertie County	< 1,000
		Camden County	9,000
		Carteret County	66,000
		Chowan County	10,000

The number of persons estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2010 values.

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Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Irene Population Model

Generated By:
Siemsen, LRL 1130 EDT 08/26/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Population Model

Landfall Expected In About 22 Hours

For Planning Purposes Only!

State	Population per State	County	Population per County
North Carolina		Craven County	87,000
(continued)		Currituck County	25,000
		Dare County	35,000
		Gates County	< 1,000
		Hyde County	6,000
		Jones County	4,000
		Martin County	< 1,000
		Onslow County	103,000
		Pamlico County	13,000
		Pasquotank County	41,000
		Pender County	3,000
		Perquimans County	12,000
		Tyrrell County	5,000
		Washington County	13,000
North Carolina	453,000		
Virginia		Accomack County	23,000
		Chesapeake city	90,000
		Norfolk city	5,000
		Northampton County	5,000
		Virginia Beach city	425,000
Virginia	548,000		

The number of persons estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2010 values.

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Hurricane Irene Population Model

Generated By:
Siemsen, LRL 1130 EDT 08/26/2011

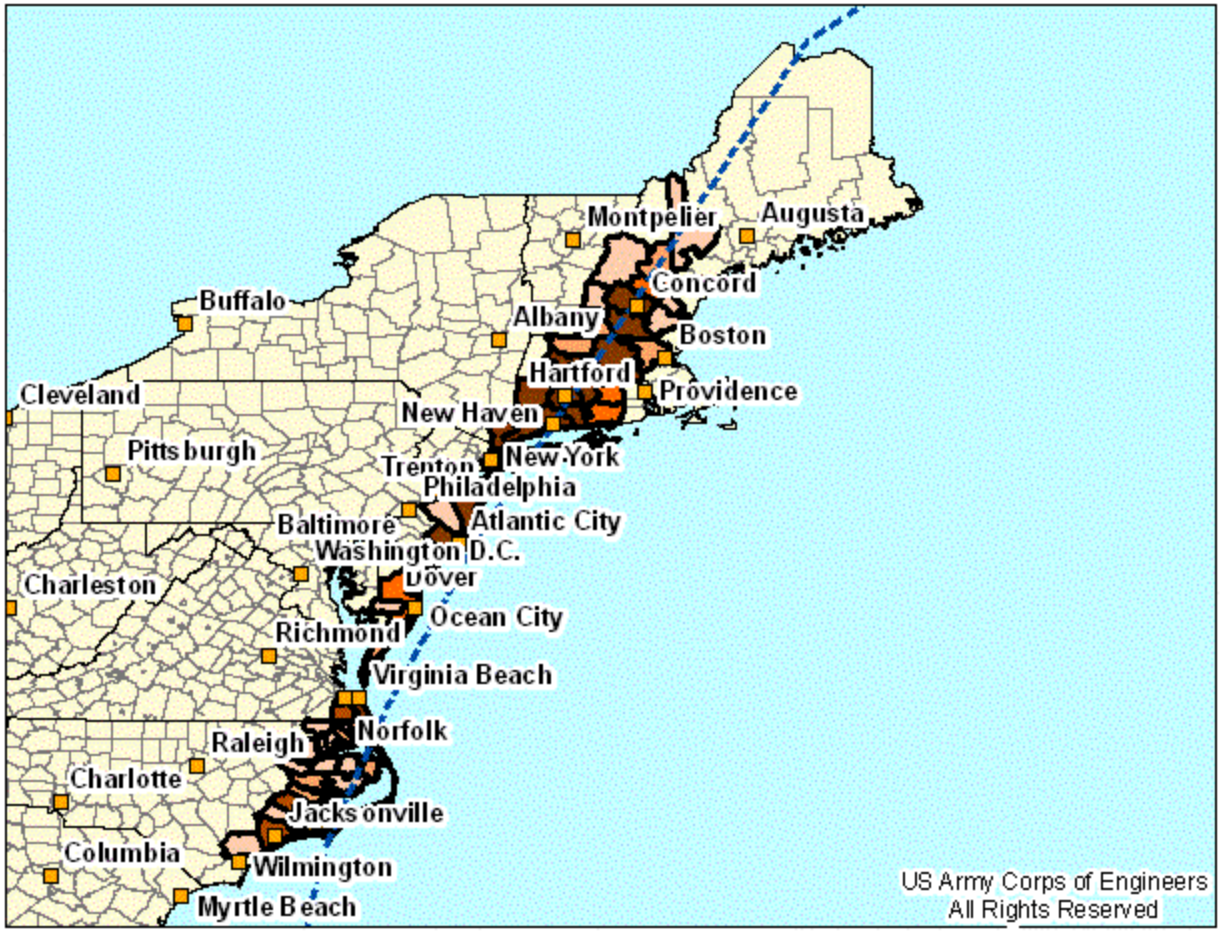
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Households Model

Landfall Expected In About 22 Hours

For Planning Purposes Only!



0 400 800 Miles

Post Landfall Households Model Results

New York - 2,998,000
Connecticut - 1,219,000
New Jersey - 499,000
Massachusetts - 466,000
New Hampshire - 206,000
Virginia - 199,000
North Carolina - 171,000
Maryland - 18,000
Delaware - 18,000
Maine - 2,000

Model results per County on following page

This model is based on a Category 2 storm making landfall near Morehead City, NC.

Forecast Track

Households

- < 7,500 households
- 7,500 - 14,999 households
- 15,000 - 24,999 households
- 25,000 - 49,999 households
- > 50000 households

Information provided on this page displays a Category 2 storm making landfall near Morehead City, NC. These projections are based on information from the NHC (1100 EDT 08/26/2011) forecast. The numbers of households included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2010 values).

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Hurricane Irene Households Model

Generated By:
Siemsen, LRL 1130 EDT 08/26/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Households Model

Landfall Expected In About 22 Hours

For Planning Purposes Only!

State	Households per State	County	Households per County
Connecticut		Fairfield County	329,000
		Hartford County	345,000
		Litchfield County	51,000
		Middlesex County	66,000
		New Haven County	330,000
		New London County	23,000
		Tolland County	55,000
		Windham County	20,000
Connecticut	1,219,000		
Delaware		Sussex County	18,000
Delaware	18,000		
Maine		Oxford County	2,000
Maine	2,000		
Maryland		Wicomico County	< 1,000
		Worcester County	18,000
Maryland	18,000		
Massachusetts		Franklin County	11,000
		Hampden County	179,000
		Hampshire County	53,000
		Middlesex County	11,000
		Worcester County	212,000
Massachusetts	466,000		
New Hampshire		Belknap County	24,000
		Carroll County	14,000
		Cheshire County	11,000
		Grafton County	< 1,000

State	Households per State	County	Households per County
New Hampshire		Hillsborough County	105,000
(continued)		Merrimack County	52,000
		Rockingham County	< 1,000
		Strafford County	< 1,000
		Sullivan County	< 1,000
New Hampshire	206,000		
New Jersey		Atlantic County	86,000
		Burlington County	< 1,000
		Cape May County	39,000
		Monmouth County	159,000
		Ocean County	215,000
New Jersey	499,000		
New York		Bronx County	265,000
		Kings County	813,000
		Nassau County	459,000
		Putnam County	< 1,000
		Queens County	821,000
		Suffolk County	484,000
		Westchester County	156,000
New York	2,998,000		
North Carolina		Beaufort County	9,000
		Bertie County	< 1,000
		Camden County	4,000
		Carteret County	28,000
		Chowan County	4,000
		Craven County	33,000

The number of households estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2010 values.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Irene Households Model

Generated By:
Siemsen, LRL 1130 EDT 08/26/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Households Model

Landfall Expected In About 22 Hours

For Planning Purposes Only!

State	Households per State	County	Households per County
North Carolina		Currituck County	10,000
(continued)		Dare County	15,000
		Gates County	< 1,000
		Hyde County	2,000
		Jones County	2,000
		Martin County	< 1,000
		Onslow County	30,000
		Pamlico County	5,000
		Pasquotank County	15,000
		Pender County	2,000
		Perquimans County	5,000
		Tyrrell County	2,000
		Washington County	5,000
North Carolina	171,000		
Virginia		Accomack County	9,000
		Chesapeake city	31,000
		Norfolk city	2,000
		Northampton County	2,000
		Virginia Beach city	155,000
Virginia	199,000		

The number of households estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2010 values.

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Hurricane Irene Households Model

Generated By:
Siemsen, LRL 1130 EDT 08/26/2011

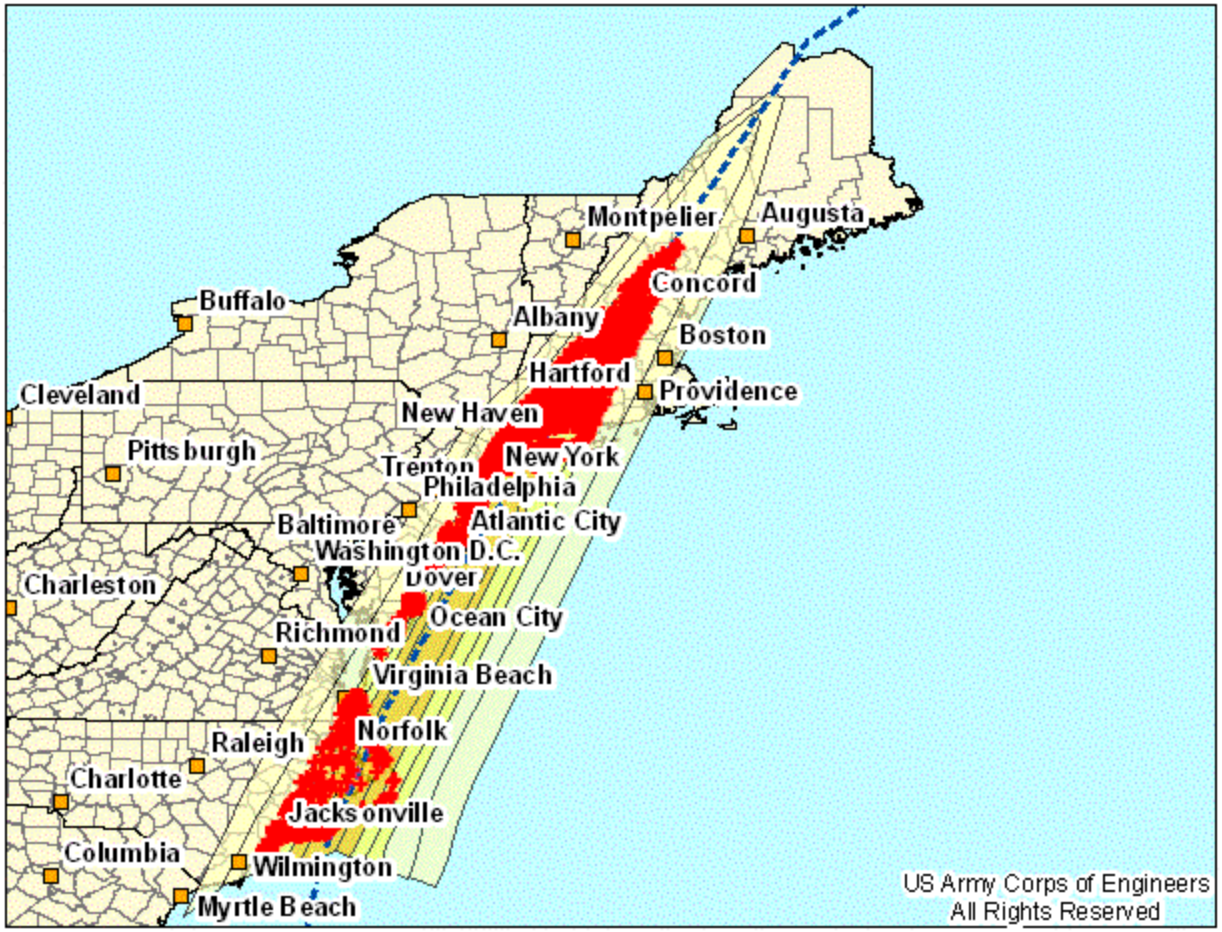
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Fire Stations

Landfall Expected In About 22 Hours

For Planning Purposes Only!



Most Probable Landfall Fire Stations Inside Hurricane Force Winds

New York - 547
Connecticut - 495
New Jersey - 236
North Carolina - 182
Massachusetts - 165
New Hampshire - 132
Virginia - 39
Maryland - 16
Delaware - 10
Maine - 4

Model results per County on following page

This model is based on a Category 2 storm making landfall near Morehead City, NC.

\+ Fire Stations

Forecast Track

Information provided on this page displays a Category 2 storm making landfall near Morehead City, NC. These projections are based on information from the NHC (1100 EDT 08/26/2011) forecast.

The number of fire stations included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2011).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

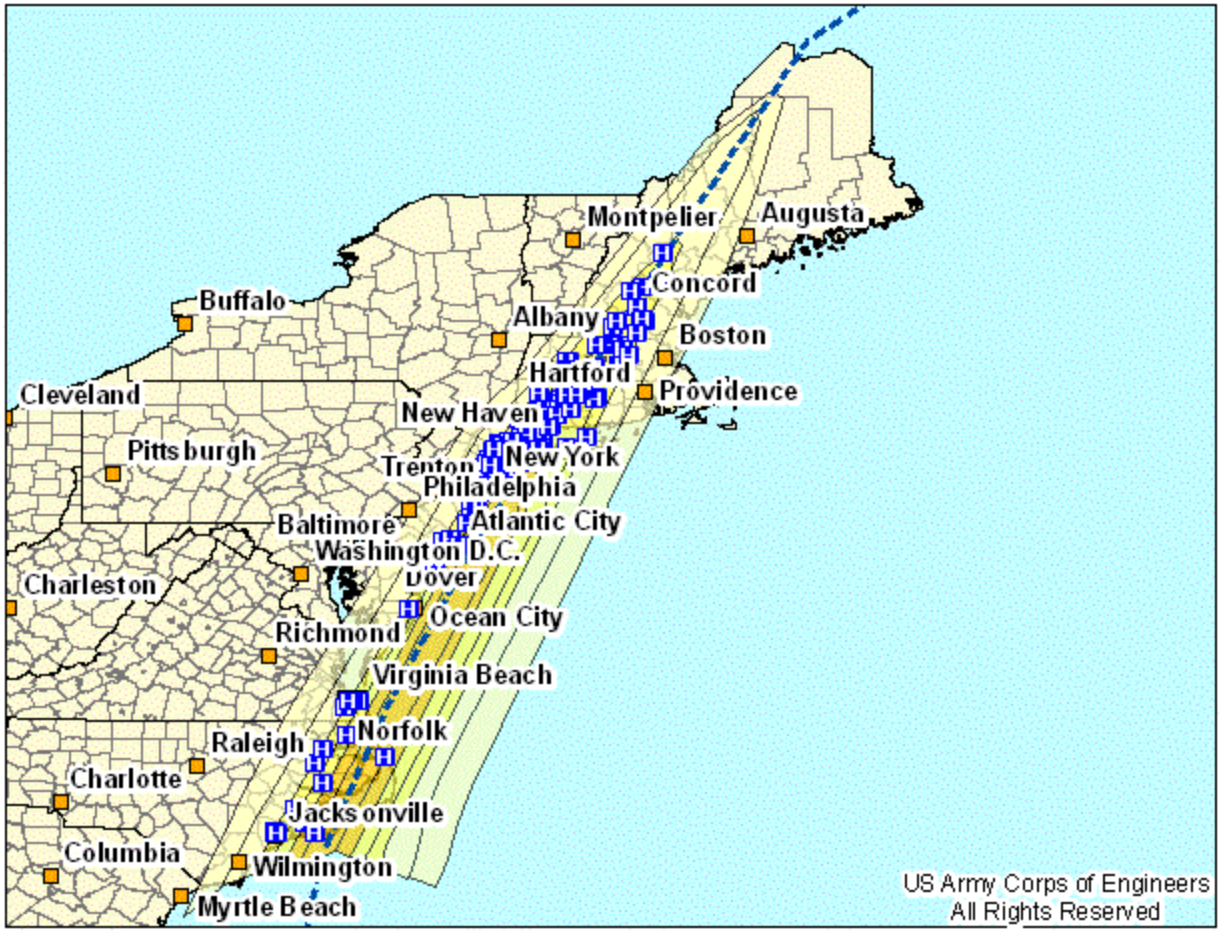
Hurricane Irene Fire Stations	
Generated By: Siemsen, LRL 1130 EDT 08/26/2011	
Sources: HURREVAC LRL-DEBRIS	Page 20 of 26

US Army Corps of Engineers

Hurricane Irene Hospitals

Landfall Expected In About 22 Hours

For Planning Purposes Only!



Most Probable Landfall Hospitals Inside Hurricane Force Winds

New York - 59
Connecticut - 40
Massachusetts - 29
New Jersey - 22
New Hampshire - 13
North Carolina - 11
Virginia - 6
Maryland - 1

Model results per County on following page

This model is based on a Category 2 storm making landfall near Morehead City, NC.

H Hospitals

Forecast Track

Information provided on this page displays a Category 2 storm making landfall near Morehead City, NC. These projections are based on information from the NHC (1100 EDT 08/26/2011) forecast.

The number of hospitals included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2011).

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Hurricane Irene Hospitals	
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Sources: HURREVAC LRL-DEBRIS	Page 21 of 26

US Army Corps of Engineers

Hurricane Irene Law Enforcement

Landfall Expected In About 22 Hours

For Planning Purposes Only!

Most Probable Landfall Law Enforcement Inside Hurricane Force Winds

New York - 235
Connecticut - 171
Massachusetts - 147
New Jersey - 104
New Hampshire - 92
North Carolina - 78
Virginia - 19
Maryland - 12
Delaware - 7
Maine - 1

Model results per County on following page

This model is based on a Category 2 storm making landfall near Morehead City, NC.

★ Law Enforcement

Forecast Track

Information provided on this page displays a Category 2 storm making landfall near Morehead City, NC. These projections are based on information from the NHC (1100 EDT 08/26/2011) forecast.

The number of law enforcement included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2011).

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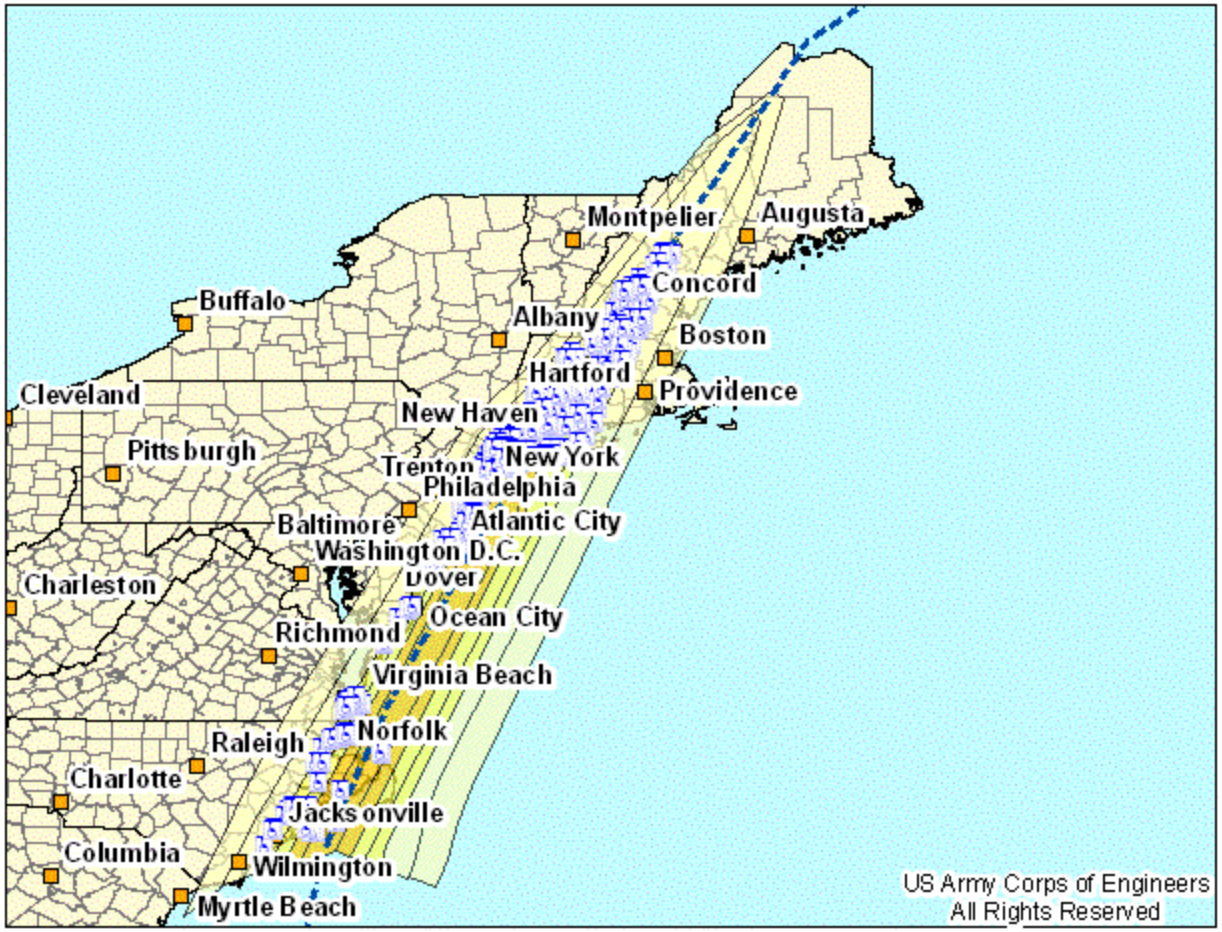
Hurricane Irene Law Enforcement	
Generated By: Siemsen, LRL 1130 EDT 08/26/2011	
Sources: HURREVAC LRL-DEBRIS	Page 22 of 26

US Army Corps of Engineers

Hurricane Irene Nursing Homes

Landfall Expected In About 22 Hours

For Planning Purposes Only!



Most Probable Landfall Nursing Homes Inside Hurricane Force Winds

Connecticut - 366
New York - 321
Massachusetts - 142
New Hampshire - 131
New Jersey - 109
North Carolina - 50
Virginia - 46
Maryland - 6
Maine - 2

Model results per County on following page

This model is based on a Category 2 storm making landfall near Morehead City, NC.

Nursing Homes
Forecast Track

Information provided on this page displays a Category 2 storm making landfall near Morehead City, NC. These projections are based on information from the NHC (1100 EDT 08/26/2011) forecast.

The number of nursing homes included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2011).

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Hurricane Irene Nursing Homes	
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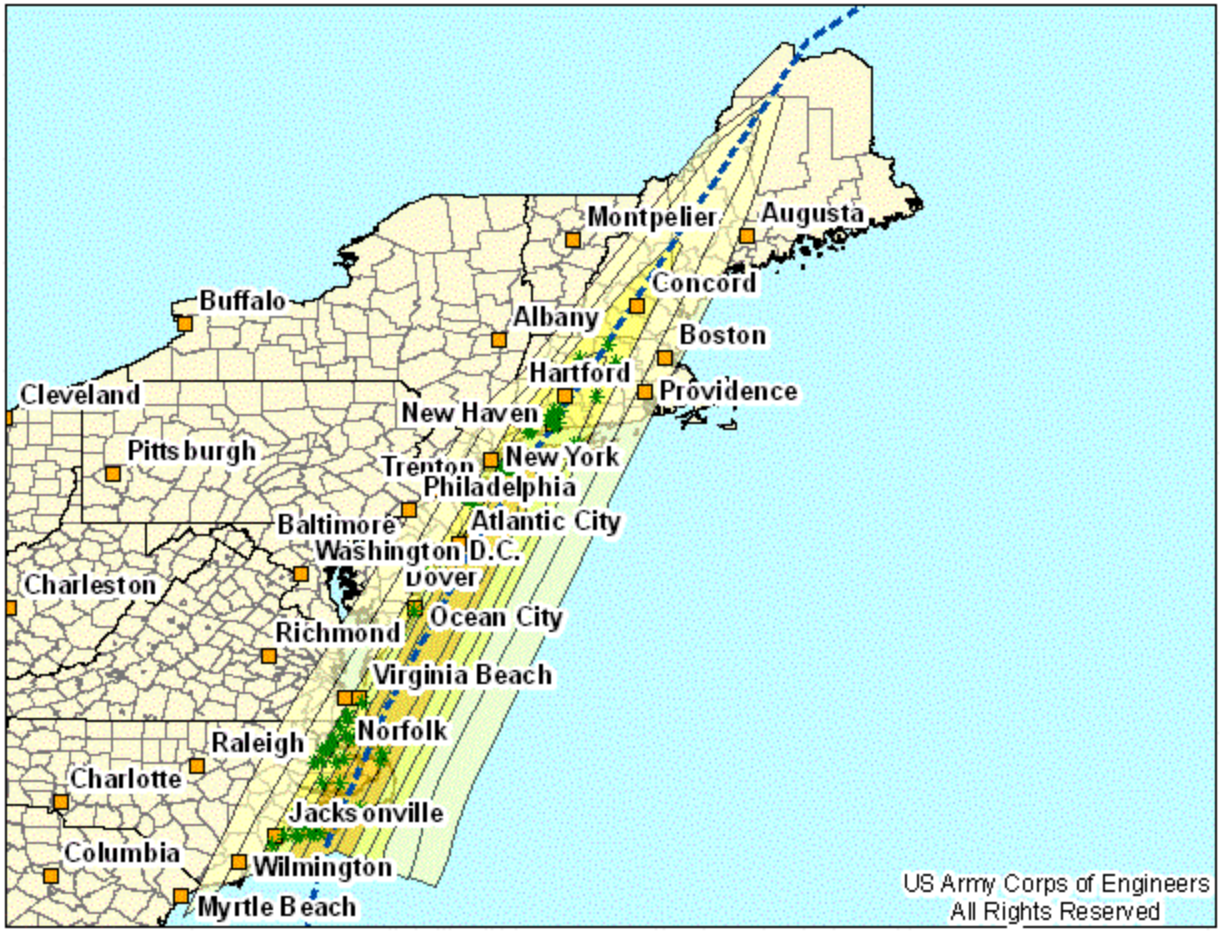
Sources: HURREVAC LRL-DEBRIS	Page 23 of 26

US Army Corps of Engineers

Hurricane Irene Potable Water

Landfall Expected In About 22 Hours

For Planning Purposes Only!



Most Probable Landfall Potable Water Inside Hurricane Force Winds

North Carolina - 32
New York - 12
Connecticut - 11
Virginia - 7
Massachusetts - 5
New Jersey - 4
Maryland - 1

Model results per County on following page

This model is based on a Category 2 storm making landfall near Morehead City, NC.

Information provided on this page displays a Category 2 storm making landfall near Morehead City, NC. These projections are based on information from the NHC (1100 EDT 08/26/2011) forecast.

The number of potable water included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2011).

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Hurricane Irene Potable Water	
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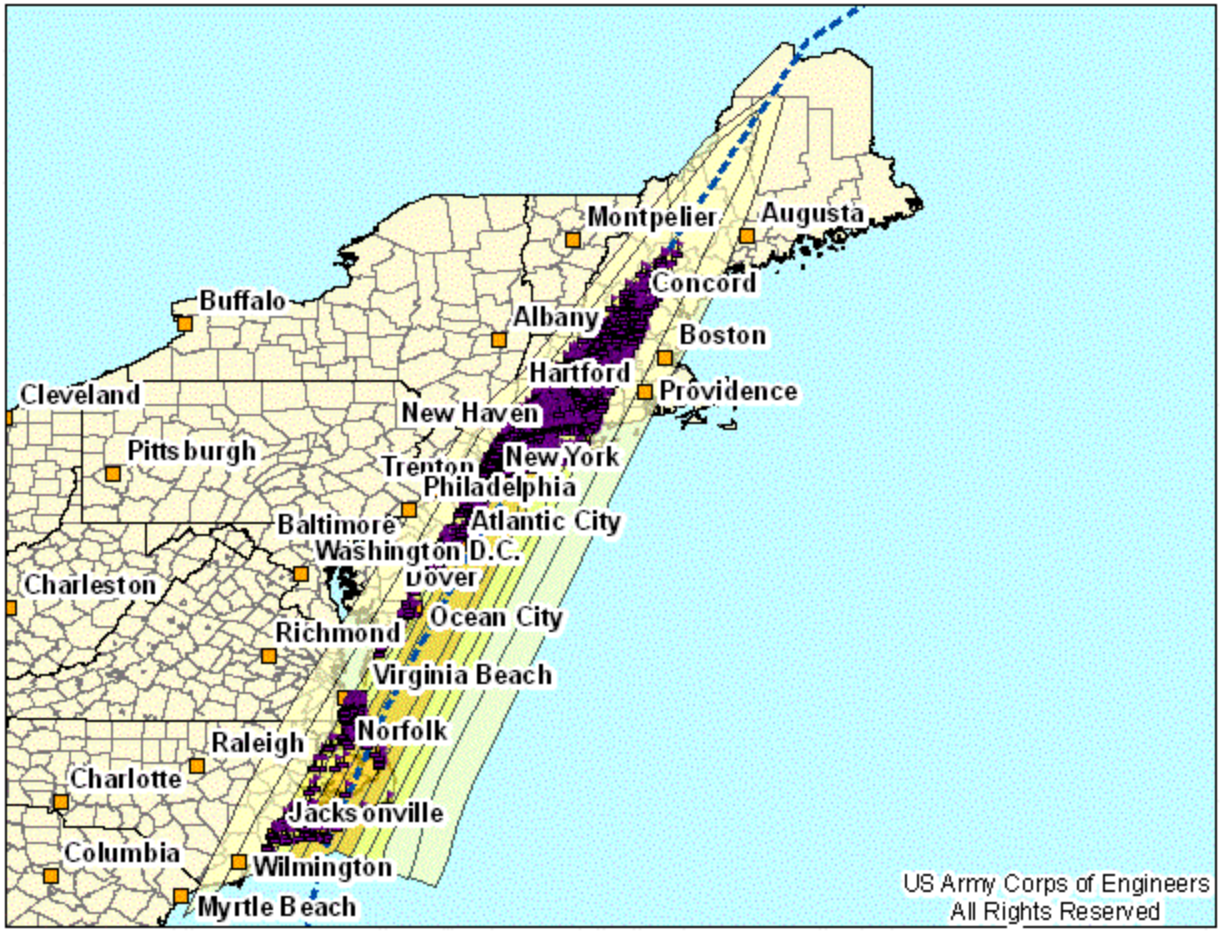
Sources: HURREVAC LRL-DEBRIS	Page 24 of 26

US Army Corps of Engineers

Hurricane Irene Schools

Landfall Expected In About 22 Hours

For Planning Purposes Only!



Most Probable Landfall Schools Inside Hurricane Force Winds

New York - 1,691
Connecticut - 1,008
Massachusetts - 390
New Jersey - 339
New Hampshire - 195
North Carolina - 134
Virginia - 130
Maryland - 11
Delaware - 5
Maine - 3

Model results per County on following page

This model is based on a Category 2 storm making landfall near Morehead City, NC.

Schools
Forecast Track

Information provided on this page displays a Category 2 storm making landfall near Morehead City, NC. These projections are based on information from the NHC (1100 EDT 08/26/2011) forecast.

The number of schools included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2011).

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Hurricane Irene Schools	
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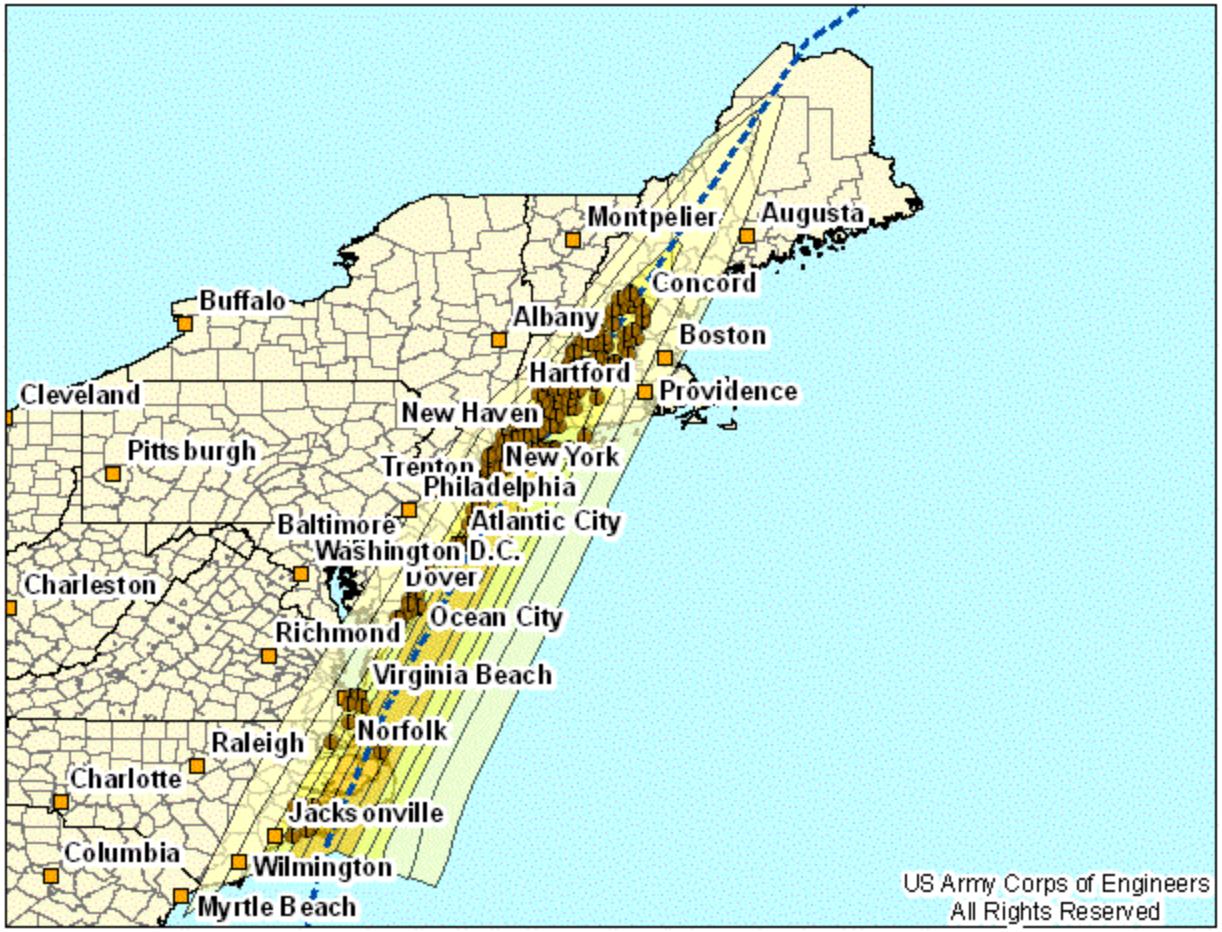
Sources: HURREVAC LRL-DEBRIS	Page 25 of 26

US Army Corps of Engineers

Hurricane Irene Sewage Treatment Plants

Landfall Expected In About 22 Hours

For Planning Purposes Only!



Most Probable Landfall Sewage Treatment Plants Inside Hurricane Force Winds

Connecticut - 64
New York - 56
Massachusetts - 47
New Hampshire - 22
New Jersey - 19
North Carolina - 8
Maryland - 7
Virginia - 5
Delaware - 3

Model results per County on following page

This model is based on a Category 2 storm making landfall near Morehead City, NC.

Sewage Treatment Plants

Forecast Track

Information provided on this page displays a Category 2 storm making landfall near Morehead City, NC. These projections are based on information from the NHC (1100 EDT 08/26/2011) forecast.

The number of sewage treatment plants included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2011).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Irene Sewage Treatment Plants	
Generated By: Siemsen, LRL 1130 EDT 08/26/2011	
Sources: HURREVAC LRL-DEBRIS	Page 26 of 26